



Refrigerators, Refrigerator-Freezers and Freezers

Explosion-Proof

3551
3551-1
3555
3555-1
3557
3557-2
3557-4

Flammable Material Storage

3551-10
3551-11
3556
3556KG
3556-4
3556-4KG
3556-6

Cool-Lab, General Purpose

3750 3761-1
3750-1 3762
3751 3762-1
3751-1 3764A
3752 3764-1A
3753 3770
3753B 3771
3754 3772
3755
3756
3757
3761

Table of Contents

Safety Information	3
Alert Signals	3
Explosion-Proof Refrigerators and Freezers	4
Overview	4
Model 3551, 3551-1	5
Model 3555, 3555-1	6
Model 3557, 3557-2, 3557-4	7
Flammable Materials Storage Refrigerators and Freezers	8
Overview	8
Model 3551-10, 3551-11	9
Model 3556, 3556KG	10
Model 3556-4, 3556-4KG	10
Model 3556-6	10
Cool Lab, General Purpose Laboratory Refrigerators and Freezers	11
Overview	11
Model 3570, 3570-1	11
Model 3751, 3751-1	11
Model 3752	12
Model 3753, 3753B	12
Model 3754	13
Model 3755	13
Model 3756	14
Model 3757	14
Model 3761, 3761-1	15
Model 3762, 3762-1	15
Model 3764A, 3764-1A	16
Model 3770	17
Model 3771	18
Model 3772	18
Unpacking and Installation	19
Shipping Carton	19
Unpacking	19
Location	19
Clearance	19
Electrical	20
Be Advised	20
Sealing Killark Box Conduit to Help Protect Against Explosions	21
Operation	24
Environmental Operating Conditions	24
Start-Up Procedure	24
Restart Procedure	24
Control Panel Lights (Model 3753)	25
How to Save Energy	26
Safety Tips	26
Optional Equipment	27
Optional Buzzer Alarm	27
Troubleshooting	29
Maintenance	30
Cleaning of Units	30
Interior/Exterior and Door Gaskets	30
Condenser	30
Manual Defrost Procedure (Models 3556-4, 3556-6, 3557-2, 3557-4, 3750, 3750-1, 3752 and 3752-1)	31
Manual Defrost Procedure (Model 3772 only)	32
Reversing the Front Door (Model 3551)	33
Reversing the Front Door (Models 3556, 3557 and 3751)	34
Reversing the Front Door (Models 3772)	35
Replacement Parts	37
Ordering Procedures	38
Warranty	40

Safety Information

Alert Signals



Warning

Warnings alert you to a possibility of personal injury.



Caution

Cautions alert you to a possibility of damage to the equipment.



Note

Notes alert you to pertinent facts and conditions.



Hot Surface

Hot surfaces alert you to a possibility of personal injury if you come in contact with a surface during use or for a period of time after use.



Warning

DANGER: RISK OF CHILD ENTRAPMENT. BEFORE YOU THROW AWAY YOUR OLD REFRIGERATOR OR FREEZER:

- TAKE OFF DOORS
- LEAVE THE SHELVES IN THE PLACE SO THAT CHILDREN MAY NOT EASILY CLIMB INSIDE.

Thank you for selecting Thermo Scientific products for your equipment needs. These instructions contain important operating and safety information. The user must carefully read and understand these instructions before using the unit. Your unit has been designed to optimize function, reliability, safety and ease of use. It is the user's responsibility to install the bath in conformance with local electrical codes.

Explosion-Proof Refrigerators and Freezers

Overview

Conventional refrigerators and freezers are not only unsuitable for storing flammable materials; they can create potential hazards in a facility. Such units have several components in their electrical and refrigeration systems that can trigger explosions of flammable air-vapor mixtures inside the unit or from the immediate surrounding area.

Motors and thermostats are designed to prevent the arcing that can ignite a flammable air-vapor mixture. In addition, each unit has wiring, splices, thermostats, relays and compressor motors safely housed within an explosion-proof enclosure, the construction being suitable for use in Class I, Groups C and D. This means that things like the surface temperature of compressors will remain below the flash point of any flammable material likely to be found in Class I, Groups C and D locations.

All models have heavy-gauge, rigid, braced-steel construction with a durable enamel finish. Interiors have epoxy enamel or ABS plastic construction. Each unit is insulated throughout for energy-efficient operation.

These units will prevent potentially destructive explosions in any facility by meeting the standards established by Underwriters' Laboratory, Inc., OSHA and National Fire Protection Association for storage of hazardous materials.

Thermo Scientific Explosion-Proof Refrigerators and Freezers are 100% explosion-proof. They also meet National Fire Protection Standards as found in Articles 500-501 and provide total protection while storing reagents at or below ambient temperatures.

MODEL 3551, 3551-1

23-1/2" Wide,
Two-door Refrigerator/Freezer

Features:

- Overall 11 cu. ft.
- Three adjustable shelves
- Four door shelves
- Hydraulic thermostat
- Adjustable natural air-flow vent
- Manual defrost
- ABS plastic interior
- White color

Model	Refrigerator Chamber Dimensions H x W x D inches (cm)	Freezer Chamber Dimensions H x W x D inches (cm)	Total Vol. Cu. Ft.	Exterior Dimensions H x W x D inches (cm)
3551	39" x 19.5" x 18" (99 x 50 x 46 cm)	12" x 18" x 16.25" (30 x 46 x 41 cm)	10.1	60" x 23.5" x 30.5" (152 x 60 x 77 cm)
3551-1	39" x 19.5" x 18" (99 x 50 x 46 cm)	12" x 18" x 16.25" (30 x 46 x 41 cm)	10.1	60" x 23.5" x 30.5" (152 x 60 x 77 cm)

Model	Electrical Characteristics Volts/Hz, Watts, Amps	Refrig. Temp. Range ° C (° F)	Freezer Temp. Range ° C (° F)	Net Wt. Lbs. (kg)	Ship Wt. Lbs. (kg)
3551	120/60, 230, 1.9	-1° to 8° (30° to 46°)	-20° to -12° (-4° to -10°)	120 (54.5)	150 (68)
3551-1	240/50, 360, 1.5	0° to 10° (32° to 50°)	-20° to 0° (-4° to 32°)	120 (54.5)	150 (68)

NOTE: Amps listed are at normal run mode, starting amps may be higher.

EXPLOSION-PROOF UNITS

MODEL 3555, 3555-1

62" Wide,
Chest freezer

Features:

- Overall 18 cu. ft.
- Key lock
- Storage basket
- Keylock lid
- Manual defrost
- White color

Model	Freezer Chamber Dimensions H x W x D inches (cm)	Total Vol. Cu. Ft.	Exterior Dimensions H x W x D inches (cm)
3555	28" x 50.25" x 22.25" (71 x 128 x 57 cm)	19	35" x 62" x 34" (89 x 158 x 86 cm)
3555-1	28" x 50.25" x 22.25" (71 x 128 x 57 cm)	19	35" x 62" x 34" (89 x 158 x 86 cm)

Model	Electrical Characteristics Volts/Hz, Watts, Amps	Freezer Temp. Range ° C (° F)	Net Wt. Lbs. (kg)	Ship Wt. Lbs. (kg)
3555	120/60, 516, 4.3	-28° to -18° (-18° to -0°)	185 (84.1)	200 (90.9)
3555-1	240/50, 516, 2.1	-28° to -18° (-18° to -0°)	185 (84.1)	200 (90.9)

NOTE: Amps listed are at normal run mode, starting amps may be higher.

MODEL 3557

23.5" Wide,
Under counter refrigerator

Features:

- Cold-wall design
- Ample door storage
- Adjustable thermostat
- Rear rollers
- Front legs level-adjust
- Magnetic gasket
- Sturdy metal hinges
- Seamless one-piece polypropylene liner
- White color
- One glass shelf

Note (3557)

THIS UNIT IS DESIGNED FOR FREE STANDING INSTALLATION ONLY. IT MAY BE INSTALLED UNDER A COUNTER ONLY IF SUFFICIENT SPACE FOR AIR FLOW IS PROVIDED. IT IS SUGGESTED THE UNIT BE RECESSED ONLY 21" TO PERMIT EASY ACCESS TO THE LOCK.

MODEL 3557-2

21.25" Wide,
Under-counter freezer

Features:

- Adjustable thermostat
- Magnetic gasket
- Hermetically-sealed compressor
- Off-cycle defrost
- White color

MODEL 3557-4

21.25" Wide,
Under-counter refrigerator/freezer

Features:

- One-piece seamless interior
- Two rustproof, slide-out shelves
- Adjustable foot
- Drip tray
- Manual defrost
- White color

Note (3557-4)

THIS UNIT IS DESIGNED FOR FREE STANDING INSTALLATION ONLY. IT MAY BE ENCLOSED ONLY IF SUFFICIENT SPACE IS PROVIDED FOR PROPER VENTILATION. 1" ON THE SIDES, TOP AND REAR, ARE RECOMMENDED.

Model	Refrigerator Chamber Dimensions H x W x D inches (cm)	Freezer Chamber Dimensions H x W x D inches (cm)	Total Vol. Cu. Ft.	Exterior Dimensions H x W x D inches (cm)
3557	27.5" x 19" x 13" (70 x 48 x 33 cm)		5.6	33.5" x 23.5" x 28" (85 x 59 x 71 cm)
3557-2		27.25" x 18" x 15" (70 x 46 x 38 cm)	5.6	33.5" x 21.25" x 29" (85 x 54 x 74 cm)
3557-4	21" x 18" x 15.25" (53 x 46 x 39 cm)	5.25" x 15.25" x 11" (13 x 39 x 28 cm)	5.6	33.5" x 21.25" x 29" (85 x 54 x 74 cm)

Model	Electrical Characteristics Volts/Hz, Watts, Amps	Refrig. Temp. Range ° C (° F)	Freezer Temp. Range ° C (° F)	Net Wt. Lbs. (kg)	Ship Wt. Lbs. (kg)
3557	120/60, 160, 1.3	2° to 7° (36° to 45°)		100 (45.3)	120 (54.5)
3557-2	120/60, 200, 1.6		-26° to -15° (-15° to 5°)	100 (45.3)	120 (54.5)
3557-4	120/60, 160, 1.3	-9° to 7° (15° to 44°)	-15° to 1° (5° to 33°)	100 (45.3)	120 (54.5)

NOTE: Amps listed are at normal run mode, starting amps may be higher.

Flammable Materials Storage Refrigerators and Freezers

Overview

These units will prevent potentially destructive explosions in any facility by meeting the standards established by Underwriters' Laboratory, Inc., OSHA and National Fire Protection Association for storage of hazardous materials. They also are designed to comply with National Fire Protection Association Standards Nos. 45 and 99, as well as OSHA Article No. CFR1910.308. Thermo Scientific Flammable Materials Storage Refrigerators/Freezers are manufactured for safe, cold storage of volatile materials.

Flammable Material Storage (FMS)

Refrigerators/Freezers will prevent an explosion from occurring inside the unit. These units have no internal electrical components that could trigger an explosion of hazardous materials inside the unit. They are NOT designed for use in Class I, Groups C and D environments. For these locations use a Thermo Scientific Explosion-Proof Refrigerator. However, FMS units are not suitable for use in Class I, Group C and D environments.

These units are ideal for storing cyclopropane, ethyl ether, ethylene, acetone, alcohol, benzene, butane, gasoline, hexane, lacquer solvent vapors, naphtha, natural gas or propane along with many other potentially hazardous materials. All cabinets have heavy-gauge steel construction with a durable exterior finish of epoxy enamel. A well insulated cabinet and tight sealing magnetic door prevent air leaks along with helping to lower operating costs. The interior is made of porcelain-enameled steel or ABS plastic.

MODEL 3551-10, 3551-11

23.5" Wide,

Two-door refrigerator/freezer



Note

In order for freezer to reach -20°C, vent on inside upper rear of refrigerator must be closed.

Features:

- Overall 11 cu. ft.
- Adjustable thermostat
- ABS plastic interior
- Manual defrost
- White color

Model	Refrigerator Chamber Dimensions H x W x D inches (cm)	Freezer Chamber Dimensions H x W x D inches (cm)	Total Vol. Cu. Ft.	Exterior Dimensions H x W x D inches (cm)
3551-10	39" x 19.5" x 18" (140 x 69 x 51 cm)	12" x 18" x 16.25" (30 x 46 x 41 cm)	10.1	60" x 23.5" x 29.25" (152 x 60 x 74 cm)
3551-11	39" x 19.5" x 18" (140 x 69 x 51 cm)	12" x 18" x 16.25" (30 x 46 x 41 cm)	10.1	60" x 23.5" x 29.25" (152 x 60 x 74 cm)

Model	Electrical Characteristics Volts/Hz, Watts, Amps	Refrig. Temp. Range ° C (° F)	Freezer Temp. Range ° C (° F)	Net Wt. Lbs. (kg)	Ship Wt. Lbs. (kg)
3551-10	120/60, 230, 1.9	-1° to 8° (30° to 46°)	-20° to -12° (-4° to -10°)	120 (54.5)	150 (68)
3551-11	240/50, 360, 1.5	-1° to 8° (30° to 46°)	-20° to -12° (-4° to -10°)	120 (54.5)	150 (68)

NOTE: Amps listed are at normal run mode, starting amps may be higher.

FLAMMABLE MATERIALS STORAGE UNITS

MODEL 3556, 3556KG

23.5" Wide, no-frost
under-counter all refrigerator
with key lock

Features:

- Cold-wall design
- Ample door storage
- Adjustable thermostat
- Rear rollers
- Front legs level-adjust
- Magnetic gasket
- Sturdy metal hinges
- Seamless one-piece polypropylene liner
- White color
- One glass shelf

NOTE (3556): THESE UNITS ARE DESIGNED FOR FREE STANDING INSTALLATION ONLY. THEY MAY BE INSTALLED UNDER A COUNTER ONLY IF SUFFICIENT SPACE FOR AIRFLOW IS PROVIDED. 1" ON THE SIDES, TOP AND REAR ARE RECOMMENDED.

MODEL 3556-4, 3556-4KG

21.25" Wide
Front-opening freezer

Features:

- Adjustable thermostat
- Magnetic gasket
- Hermetically-sealed compressor
- Off cycle defrost
- White color

MODEL 3556-6

21.25" Wide
Refrigerator/freezer

Features:

- One-piece seamless interior
- Two rustproof, slide-out shelves
- Three in-door racks
- Adjustable foot
- Drip tray
- Manual defrost
- White color

NOTE (3556-6): THIS UNIT IS DESIGNED FOR FREE STANDING INSTALLATION ONLY. IT MAY BE ENCLOSED ONLY IF SUFFICIENT SPACE IS PROVIDED FOR PROPER VENTILATION. 1" ON THE SIDES, TOP AND REAR ARE RECOMMENDED.

Model	Refrigerator Chamber Dimensions H x W x D inches (cm)	Freezer Chamber Dimensions H x W x D inches (cm)	Total Vol. Cu. Ft.	Exterior Dimensions H x W x D inches (cm)
3556	27.5" x 19" x 13" (70 x 48 x 33 cm)		5.6	33.5" x 23.5" x 28" (85 x 59 x 71 cm)
3556-4		27.5" x 18" x 15" (70 x 46 x 38 cm)	5.6	33.5" x 21.25" x 29.25" (85 x 54 x 74 cm)
3556-6	21" x 18" x 15.25" (53 x 46 x 39 cm)	5.25" x 15.25" x 11" (13 x 39 x 28 cm)	5.6	33.5" x 21.25" x 29.25" (85 x 54 x 74 cm)

Model	Electrical Characteristics Volts/Hz, Watts, Amps	Refrig. Temp. Range ° C (° F)	Freezer Temp. Range ° C (° F)	Net Wt. Lbs. (kg)	Ship Wt. Lbs. (kg)
3556	120/60, 160, 1.3	2° to 7° (36° to 45°)		100 (45.5)	120 (54.5)
3556-4	120/60, 200, .60		-26° to -15° (-15° to 5°)	100 (45.5)	120 (54.5)
3556-6	120/60, 160, 1.3	-9° to 7° (15° to 44°)	-15° to 1° (5° to 33°)	100 (45.5)	120 (54.5)

NOTE: Amps listed are at normal run mode, starting amps may be higher.

Cool Lab, General-Purpose Laboratory Refrigerators/Freezers

MODEL 3750, 3750-1

21.25" Wide,
Refrigerator/freezer

Features:

- One-piece seamless interior
- Two rustproof, slide-out shelves
- Three in-door shelves
- Adjustable foot
- Drip tray
- Manual defrost
- White color

NOTE (3750 and 3751): THESE UNITS ARE DESIGNED FOR FREE STANDING INSTALLATION ONLY. IT MAY BE INSTALLED UNDER A COUNTER ONLY IF SUFFICIENT SPACE FOR AIRFLOW IS PROVIDED.

Overview

These are general-purpose units available in all refrigerator, all freezer and combination refrigerator/freezer models.

MODEL 3751, 3751-1

23.33" Wide,
Under-counter freezer

Features:

- ABS plastic interior
- Four adjustable shelves
- Adjustable thermostat
- Magnetic door gasket
- White color
- Key lock
- One glass shelf

Model	Refrigerator Chamber Dimensions H x W x D inches (cm)	Freezer Chamber Dimensions H x W x D inches (cm)	Total Vol. Cu. Ft.	Exterior Dimensions H x W x D inches (cm)
3750	21" x 18" x 15.25" (53 x 46 x 39 cm)	5.25" x 15.25" x 11" (13 x 39 x 28 cm)	5.6	33.5" x 21.25" x 25.25" (85 x 54 x 64 cm)
3750-1	21" x 18" x 15.25" (53 x 46 x 39 cm)	5.25" x 15.25" x 11" (13 x 39 x 28 cm)	5.6	33.5" x 21.25" x 25.25" (85 x 54 x 64 cm)
3751	27.5" x 19" x 13" (70 x 48 x 33 cm)		5.6	33.3" x 23.5" x 24.5" (85 x 59 x 62 cm)
3751-1	27.5" x 19" x 13" (70 x 48 x 33 cm)		5.6	33.3" x 23.5" x 24.5" (85 x 59 x 62 cm)

Model	Electrical Characteristics Volts/Hz, Watts, Amps	Refrig. Temp. Range ° C (° F)	Freezer Temp. Range ° C (° F)	Net Wt. Lbs. (kg)	Ship Wt. Lbs. (kg)
3750	120/60, 160, 1.3	-9° to 7° (15° to 44°)	-15° to 1° (5° to 33°)	100 (45.4)	120 (54.5)
3750-1	240/50, 160, 0.66	2° to 7° (36° to 44°)	-2° to -6° (-15° to 21°)	100 (45.4)	120 (54.5)
3751	120/60, 160, 1.3	2° to 7° (36° to 44°)	N/A	100 (45.4)	120 (54.5)
3751-1	240/50, 200, 0.8	2° to 7° (36° to 44°)	N/A	100 (45.4)	120 (54.5)

COOL LAB GENERAL-PURPOSE LABORATORY REFRIGERATORS/FREEZERS

MODEL 3752

21.25" Wide,
Under-counter freezer

Features:

- Adjustable thermostat
- Magnetic gasket
- Hermetically-sealed compressor
- Manual defrost
- White color

MODEL 3753, 3753B

24" Wide,
Under-counter freezer

Features:

- Exterior thermostat
- High temperature alarm
- Reversible door
- 3 slide out drawers
- Key lock
- White color

Model	Refrigerator Chamber Dimensions H x W x D inches (cm)	Freezer Chamber Dimensions H x W x D inches (cm)	Total Vol. Cu. Ft.	Exterior Dimensions H x W x D inches (cm)
3752 3752KP	N/A	27.5" x 18" x 15" (70 x 46 x 38 cm)	5.6	33.5" x 21.25" x 26" (85 x 54 x 66 cm)
3752-1	N/A	27.5" x 18" x 15" (70 x 46 x 38 cm)	5.6	33.5" x 21.25" x 26" (85 x 54 x 66 cm)
3753	N/A	24" x 17.5" x 16" (61 x 45 x 41 cm)	4.0	34" x 24" x 24" (86 x 61 x 61 cm)

Model	Electrical Characteristics Volts/Hz, Watts, Amps	Refrig. Temp. Range ° C (° F)	Freezer Temp. Range ° C (° F)	Net Wt. Lbs. (kg)	Ship Wt. Lbs. (kg)
3752 3752KP	120/60, 200, 1.6	N/A	-26° to -15° (-15° to 5°)	100 (45.4)	120 (54.5)
3752-1	240/50, 200, 0.8	N/A	-26° to -15° (-15° to 5°)	100 (45.4)	120 (54.5)
3753	240/50, 144, 1.2	N/A	-35° to -20° (-31° to -4°)	100 (45.4)	120 (54.5)

NOTE: Amps listed are at normal run mode, starting amps may be higher.

COOL LAB GENERAL-PURPOSE LABORATORY REFRIGERATORS/FREEZERS

MODEL 3754

24" Wide,
Front Venting Refrigerator
0 Clearance Front and Sides

Features:

- Automatic cycle defrost
- 2 adjustable shelves
- Built-in or freestanding

MODEL 3755

24" Wide,
Front Venting Freezer
0 Clearance Front and Sides

Features:

- Manual defrost
- 3 shelves
- Reversible door
- Built-in or freestanding

Model	Refrigerator Chamber Dimensions H x W x D inches (cm)	Freezer Chamber Dimensions H x W x D inches (cm)	Total Vol. Cu. Ft.	Exterior Dimensions H x W x D inches (cm)
3754	28" x 21" x 20.75" (71 x 53 x 53 cm)	N/A	6.1	34" x 23.88" x 24" (86 x 61 x 61 cm)
3755	N/A	27" x 20.75" x 17.75" (69 x 53 x 45 cm)	6.0	35.13" x 24" x 23.5" (89 x 61 x 60 cm)

Model	Electrical Characteristics Volts/Hz, Watts, Amps	Refrig. Temp. Range ° C (° F)	Freezer Temp. Range ° C (° F)	Net Wt. Lbs. (kg)	Ship Wt. Lbs. (kg)
3754	115/60, 380, 3.3	1° to 7° (33° to 45°)	N/A	100 (45.4)	120 (54.5)
3755	120/60, 300, 2.5	N/A	-5° to -20° (23° to -4°)	100 (45.4)	120 (54.5)

NOTE: Amps listed are at normal run mode, starting amps may be higher.

COOL LAB GENERAL-PURPOSE LABORATORY REFRIGERATORS/FREEZERS

MODEL 3756

20" Wide,
Cube Size Refrigerator
Reversible Door Swing

Features:

- Adjustable thermostat
- Automatic defrost
- Front-mounted lock
- 1 Interior shelf
- 100% CFC Free

MODEL 3757

20" Wide,
Cube Size Freezer
Reversible Door Swing

Features:

- Adjustable thermostat
- Manual defrost
- Front-mounted lock
- 100% CFC Free

Model	Refrigerator Chamber Dimensions H x W x D inches (cm)	Freezer Chamber Dimensions H x W x D inches (cm)	Total Vol. Cu. Ft.	Exterior Dimensions H x W x D inches (cm)
3756	15.75" x 15.5" x 12" (40 x 40 x 30.5 cm)	N/A	1.8	20" x 20" x 21" (51 x 51 x 53 cm)
3757	N/A	15.5" x 14" x 13.5" (39 x 36 x 34 cm)	1.6	20" x 20" x 21" (51 x 51 x 53 cm)

Model	Electrical Characteristics Volts/Hz, Watts, Amps	Refrig. Temp. Range ° C (° F)	Freezer Temp. Range ° C (° F)	Net Wt. Lbs. (kg)	Ship Wt. Lbs. (kg)
3756	115/60, 83, 1.2	1° to 7° (34° to 45°)	N/A	47 (20)	75 (34)
3757	115/60, 83, 1.2	N/A	-20° to -10° (-4° to 14°)	49 (22)	65 (29)

NOTE: Amps listed are at normal run mode, starting amps may be higher.

COOL LAB GENERAL-PURPOSE LABORATORY REFRIGERATORS/FREEZERS

MODEL 3761, 3761-1

31.5" Wide,
Top Opening Chest Freezer

Features:

- Key locking cover
- Storage basket
- Keylock lid
- Manual defrost
- White color

MODEL 3762, 3762-1

61.25" Wide,
Top Opening Chest Freezer

Features:

- Key locking cover
- Storage basket
- Keylock lid
- Manual defrost
- White color

Model	Refrigerator Chamber Dimensions H x W x D inches (cm)	Freezer Chamber Dimensions H x W x D inches (cm)	Total Vol. Cu. Ft.	Exterior Dimensions H x W x D inches (cm)
3761	N/A	28" x 26.25" x 16.5" (71 x 67 x 42 cm)	7.0	35" x 31.5" x 24.5" (89 x 80 x 62 cm)
3761-1	N/A	28" x 26.25" x 16.5" (71 x 67 x 42 cm)	7.0	35" x 31.5" x 24.5" (89 x 80 x 62 cm)
3762	N/A	28" x 50.25" x 22.25" (71 x 128 x 57 cm)	19.7	35" x 61.25" x 29.5" (89 x 156 x 75 cm)
3762-1	N/A	28" x 50.25" x 22.25" (71 x 128 x 57 cm)	19.7	35" x 61.25" x 29.5" (89 x 156 x 75 cm)

Model	Electrical Characteristics Volts/Hz, Watts, Amps	Refrig. Temp. Range ° C (° F)	Freezer Temp. Range ° C (° F)	Net Wt. Lbs. (kg)	Ship Wt. Lbs. (kg)
3761	120/60, 276, 1.5	N/A	-21° to -4° (-5° to 24°)	95 (43.2)	125 (56.8)
3761-1	240/50, 276, 0.9	N/A	-21° to -4° (-5° to 24°)	95 (43.2)	125 (56.8)
3762	120/60, 516, 4.3	N/A	-28° to -18° (-18° to 0°)	185 (84.1)	200 (90.9)
3762-1	240/50, 516, 2.1	N/A	-28° to -18° (-18° to 0°)	185 (84.1)	200 (90.9)

NOTE: Amps listed are at normal run mode, starting amps may be higher.

COOL LAB GENERAL-PURPOSE LABORATORY REFRIGERATORS/FREEZERS

MODEL 3764A, 3764-1A

23" Wide,
Two-Door Refrigerator/Freezer

Features:

- 3 adjustable shelves
- Manual defrost
- White color

Model	Refrigerator Chamber Dimensions H x W x D inches (cm)	Freezer Chamber Dimensions H x W x D inches (cm)	Total Vol. Cu. Ft.	Exterior Dimensions H x W x D inches (cm)
3764A	32" x 19.75" x 17.5" (81 x 50 x 45 cm)	8" x 17.25" x 12" (20 x 44 x 31 cm)	10.0	58" x 23" x 25" (147 x 58 x 64 cm)
3764-1A	32" x 19.75" x 17.5" (81 x 50 x 45 cm)	8" x 17.25" x 12" (20 x 44 x 31 cm)	10.0	58" x 23" x 25" (147 x 58 x 64 cm)

Model	Electrical Characteristics Volts/Hz, Watts, Amps	Refrig. Temp. Range ° C (° F)	Freezer Temp. Range ° C (° F)	Net Wt. Lbs. (kg)	Ship Wt. Lbs. (kg)
3764A	120/60, 360, 3.0	1° to 10° (34° to 50°)	-17° to -6° (-1° to 21°)	120 (54.5)	150 (68.24)
3764-1A	240/50, 360, 1.5	1° to 10° (34° to 50°)	-17° to -6° (-1° to 21°)	120 (54.5)	150 (68.24)

NOTE: Amps listed are at normal run mode, starting amps may be higher.

COOL LAB GENERAL-PURPOSE LABORATORY REFRIGERATORS/FREEZERS

MODEL 3770

18.5" Wide,
Benchtop Refrigerator with ice compartment



Note

Model 3770, allow the following
clearance: Top - 12", Back - 5",
Sides - 1/2"

Features:

- Overall 1.7 cu. ft.
- Removable shelf
- Manual defrost
- White color

Model	Refrigerator Chamber Dimensions H x W x D inches (cm)	Freezer Chamber Dimensions H x W x D inches (cm)	Total Vol. Cu. Ft.	Exterior Dimensions H x W x D inches (cm)
3770	15" x 16" x 14" (38 x 41 x 36 cm)	6" x 6" x 10" (15 x 16 x 25 cm)	1.7	19" x 18.5" x 20" (48 x 47 x 51 cm)

Model	Electrical Characteristics Volts/Hz, Watts, Amps	Refrig. Temp. Range °C (°F)	Net Wt. Lbs. (kg)	Ship Wt. Lbs. (kg)
3770	120/60, 96, 0.8	0° to 7° (32° to 45°)	35 (16)	40 (18.2)

NOTE: Amps listed are at normal run mode, starting amps may be higher.

COOL LAB GENERAL-PURPOSE LABORATORY REFRIGERATORS/FREEZERS

MODEL 3771

24" Wide,
Combination Refrigerator/Freezer

Features:

- 4 adjustable refrigerator shelves
- 2 adjustable freezer shelves
- Automatic defrost
- Reversible doors
- Key lock
- Front mount thermostat
- Designed to fit under overhead counters
- White color

MODEL 3772

23.5" Wide,
Combination Refrigerator/Freezer

Features:

- 4 adjustable refrigerator shelves
- 3 fixed freezer shelves
- Automatic defrost refrigerator
- Manual defrost freezer
- Reversible doors
- 2 independent adjustable thermostat
- 2 independent compressors
- White color

Model	Refrigerator Chamber Dimensions H x W x D inches (cm)	Freezer Chamber Dimensions H x W x D inches (cm)	Total Vol. Cu. Ft.	Exterior Dimensions H x W x D inches (cm)
3771	35.5" x 18.5" x 14" (90 x 47 x 36 cm)	13" x 18.5" x 10.5" (33 x 47 x 27 cm)	8.8	61" x 24" x 23" (155 x 61 x 529 cm)
3772	35" x 19" x 16" (89 x 48 x 41 cm)	28" x 17" x 16" (71 x 43 x 41 cm)	11.8	78.5" x 23.5" x 25" (199 x 60 x 63 cm)

Model	Electrical Characteristics Volts/Hz, Watts, Amps	Refrig. Temp. Range ° C (° F)	Freezer Temp. Range ° C (° F)	Net Wt. Lbs. (kg)	Ship Wt. Lbs. (kg)
3771	120/60, 120, 1.0	-6° to 7° (21° to 45°)	-20° to -8° (-4° to 18°)		160 (73)
3772	120/60, 648, 5.4	2° to 7° (35° to 45°)	-28° to -16° (-18° to 3°)	192 (87)	202 (92)

NOTE: Amps listed are at normal run mode, starting amps may be higher.

Unpacking and Installation

Shipping Carton

This should be inspected upon delivery. When received, carefully examine for any shipping damage before unpacking. If damage is discovered, the delivering carrier should both specify and sign for the damage on your copy of the delivery receipt.

Open the carton carefully making certain that all parts are accounted for before packaging materials are discarded. After unpacking, if damage is found, promptly report it to the carrier and request a damage inspection promptly.

IMPORTANT: Failure to request an inspection of damage within a few days after receipt of shipment absolves the carrier from any liability for damage. You must call for a damage inspection promptly.

Unpacking

Use the list below when unpacking to verify that the complete unit has been received. Do not discard packing materials until all is accounted for.

The following items are included in the shipment:

Refrigerator/Freezer	
Operation Manual	057-196-00
Volt Warning Tag - 240V	528-609-00
Registration Card	528-022-00
Inspection Tag	528-028-00

Location

Locate your unit in the most convenient place and near a grounded electric outlet. If units are placed on a counter-top, the front should be 3" or more back from the edge to avoid accidental tipping of the unit.

If possible, locate your unit out of direct sunlight and away from heat sources such as a radiator, stove or heat duct.

Clearance

Position the unit so that there is at least 12" clearance on the top, 3" at the back, and 2" on each side. It is recommended that even more space be left at the back of the unit in case maintenance is required.

**Caution**

DO NOT REMOVE, under any circumstance, the grounding prongs from the 3-prong power cord supplied with all units.

**Caution**

DO NOT USE electrical extension cords that may result in voltage loss and possible hazardous operation.

**Caution**

Risk of electric shock. (For units with B, R27 and R30 options.) THIS equipment has two power supply cords. Unplug all cords before moving or servicing this equipment.

**Warning**

Explosion-proof units do not come with line cords. They require rigid conduit to be run directly in order to seal off the fitting on thermostat housing. This should be done by a licensed electrician and follow all local and electrician and follow all local electrical codes. If any questions pertaining to electrical safety arises, please refer to article 501 of the National Electrical Code.

Electrical

Units must be connected to a grounded outlet matching the nameplate and/or the information furnished in this manual.

If you are not sure about the outlet, you should contact a qualified electrician for assistance.

The unit should always be connected to its own individual outlet.

Be Advised

WARNING: UNLESS UNIT IS SPECIFICALLY DESIGNED FOR COMBUSTIBLE OR FLAMMABLE ATMOSPHERES DO NOT USE IN THE PRESENCE OF FLAMMABLE OR COMBUSTIBLE MATERIALS OR EXPLOSIVE GASES. DO NOT USE IN THE PRESENCE OF PRESSURIZED OR SEALED CONTAINERS—FIRE OR EXPLOSION MAY RESULT CAUSING DEATH.

CAUTION: BEFORE CONNECTING THE FINAL POWER SUPPLY, CHECK THE ELECTRICAL CHARACTERISTICS OF THE UNIT NAMEPLATE TO SEE THAT IT IS IN AGREEMENT WITH THE POWER SUPPLIED. IN ADDITION, POWER SHOULD BE WIRED TO THE UNIT ACCORDING TO THE ELECTRICAL SCHEMATIC AND ALL APPLICABLE CODES. ONLY QUALIFIED ELECTRICIANS SHOULD WORK ON THE ELECTRICAL PORTION OF ANY UNIT INSTALLATION.

CAUTION: STORAGE BY USER OF ANY MATERIALS IN THE PRODUCT THAT MAY CAUSE A DETERIORATION OF THE PRODUCT SHALL BE DEEMED TO CONSTITUTE ABNORMAL AND IMPROPER USAGE OF THE PRODUCT FOR PURPOSES OF THIS WARRANTY.

WARNING: RISK OF CHILD ENTRAPMENT! Before you discard your old refrigerator or freezer:

- Remove door(s),
- Leave the shelves in place so that children may not easily climb inside.

How to Seal Killark® Box Conduit with Fiber and Sealing Compound to Help Protect Against Explosions (Explosion-Proof Units Only):

The purpose of the procedure that follows is to build fiber rope dams on the left and right hubs of the horizontal conduit. The fiber rope dams will surround conduit wiring that is housed inside the horizontal conduit.

When both the left and right fiber rope dams have been pressed into place, sealing compound is poured between the two and forms into an airtight plug.

All of this is done in order to prevent the very real threat of gas entering the Killark box and a resulting serious explosion.

After the unit wires have been pulled through the horizontal conduit the following procedure is required:

- Turn power off at the circuit breaker before proceeding.
- Place a small amount of sealing compound granules, enclosed, into a clean mixing vessel. Add small amounts of water while stirring until a thick paste is formed, then carefully continue adding smaller amounts of water until a thick gravy consistency is achieved—NOT WATERY. Discard any material that becomes too stiff to use. Never attempt to restore workability by stirring in more water.
- Locate silver Killark box, back/top-center of unit.
- Unscrew conduit domed-cover.

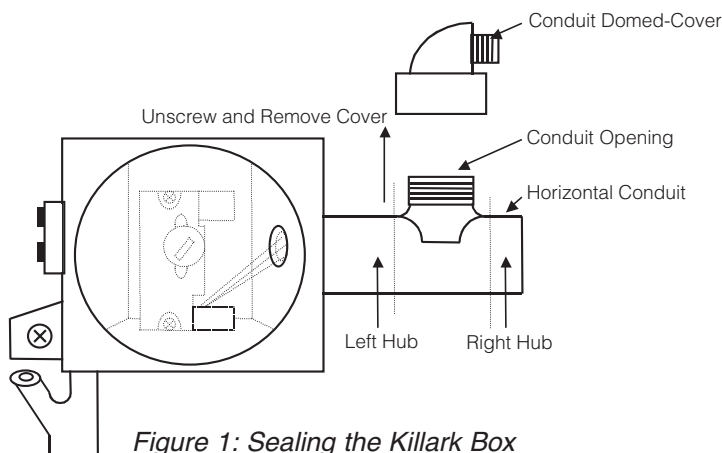
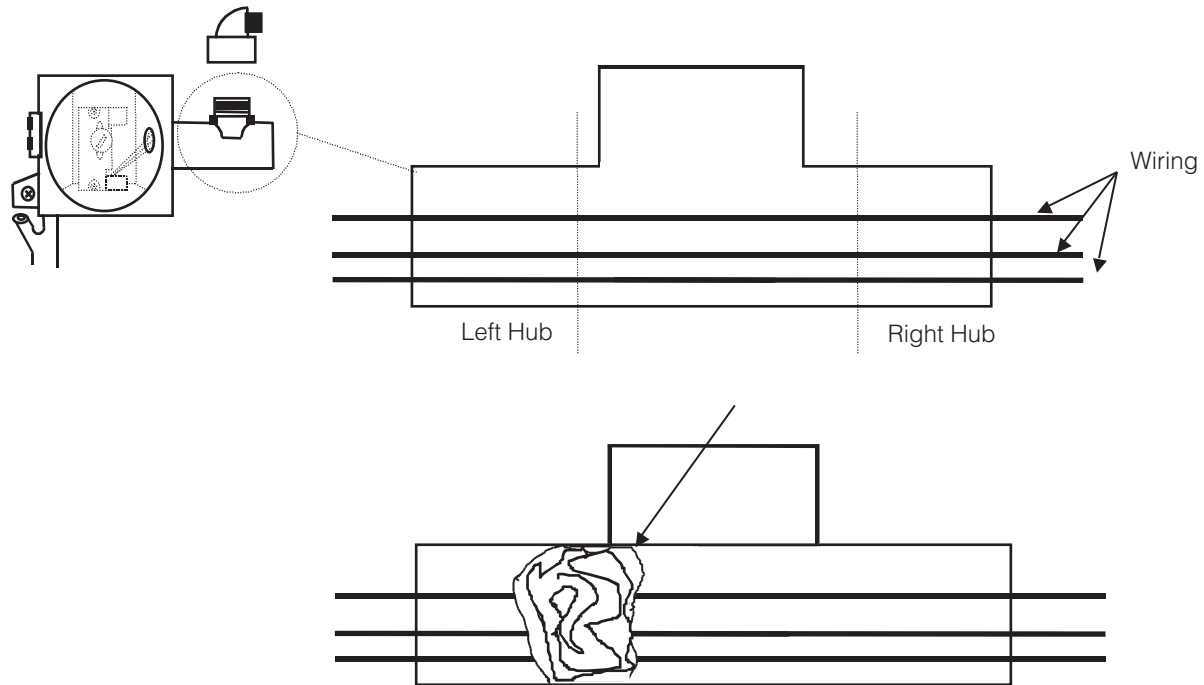


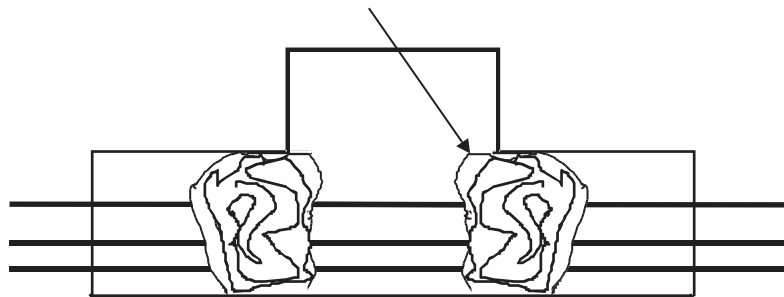
Figure 1: Sealing the Killark Box

INSTALLATION

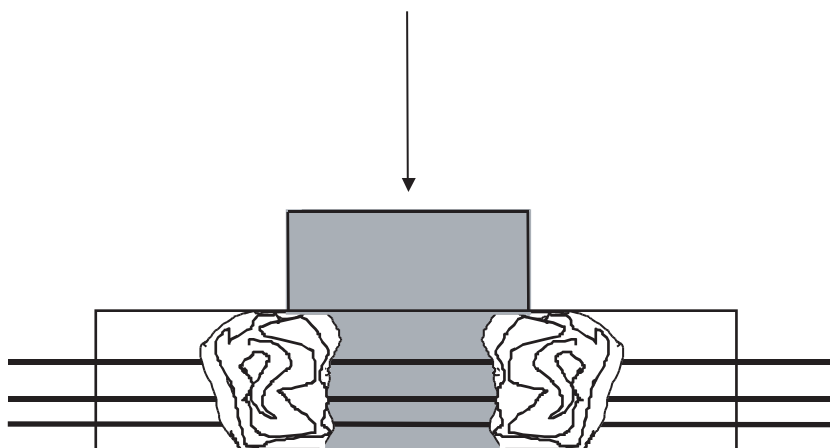
Figure 2: Horizontal Conduit, Cutaway



- Insert fiber rope material down into horizontal conduit opening. Pressing down firmly, work the material into the left hub and—most importantly—being sure the material **COMPLETELY SURROUNDS THE WIRING**, from the top to the bottom, completely blocking this end of the horizontal conduit.



- Insert fiber rope material down into horizontal conduit opening. Pressing down firmly, work the material into the right hub and—most importantly—being sure the material **COMPLETELY SURROUNDS THE WIRING**, from the top to the bottom, completely blocking this end of the horizontal conduit.



- Pour sealing compound down in between the two fiber rope dams filling the remaining space. Pour slowly, being careful not to trap air bubbles. Immediately wipe off any spilled sealing compound.
- Screw conduit domed-cover back onto conduit opening.

NOTE: INITIAL SETUP OF SEALING COMPOUND WILL OCCUR IN APPROXIMATELY 30 MINUTES HOWEVER, THE SEALING COMPOUND REQUIRES A **MINIMUM OF 8 HOURS ABOVE 32°F** TO DEVELOP SUFFICIENT STRENGTH TO WITHSTAND EXPLOSIONS.

Operation

Environmental Operating Conditions

POLLUTION DEGREE*:	2
INSTALLATION CATEGORY*:	II
ALTITUDE:	2000 Meters MSL (Mean Sea Level)
HUMIDITY:	80% maximum, non-condensing
ELECTRICAL SUPPLY:	120VAC or 240VAC
VOLTAGE TOLERANCE:	±10% of normal rated line
TEMPERATURE:	15°C to 40°C
PRODUCT USAGE:	This product is intended for use indoors only

**Refer to IEC 664-1*

Start-Up Procedure

Rotate the control knob clockwise to lower the temperature and counterclockwise raise it.

To check chamber temperature, place a dial thermometer on a shelf in the center of the chamber. Initially, rotate the temperature control knob to an arbitrary setting. Allow approximately 2 hours for the temperature to initially stabilize. Check the temperature and compare with the dial setting.

Adjust dial further to reach the desired operating temperature. After chamber initially stabilizes, allow 1/2 to 1 hour for the chamber temperature to stabilize after subsequent temperature adjustments.

Because the markings on the dial do not indicate specific temperatures, use them AS REFERENCE POINTS ONLY for any future setting of the temperature.

If the room thermostat is turned below 60°F at night, consider setting the temperature control one step colder. It should be left at this setting for the nighttime period; return temperature control to original setting when the room thermostat is returned to its normal setting.

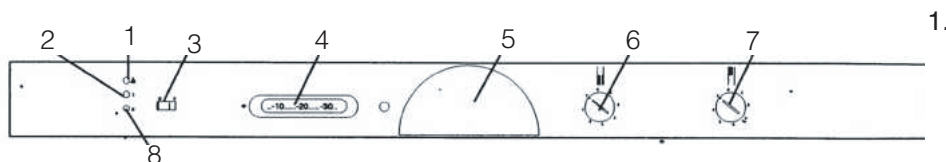
Restart Procedure

If unit is unplugged or turned off, allow 3 minutes before restarting or plugging it back in.

Control Panel Lights

(Model 3753)

- **Warning Lamp, Top, Red:** This light works only for the freezer compartment. It illuminates when the temperature decreases from the set point then turns off when the freezer has achieved set point again. This lamp will also light when the unit is turned on and is still at room temperature and will turn off when the unit begins to cool.
- **Deep Freezing, Bottom, Yellow:** This light will glow when the thermostat is rotated fully clockwise to “super.” This position keeps the compressor fully on until the normal cycle for the freezer is turned on. It will get to the low-end temperature faster until you want to regulate the temperature. The deep freeze (super) mode can be kept on at all times if desired.



3772 Control Panel

WARNING LAMP

- POWER INDICATOR (GREEN)
- BUTTON FOR DEEP-FREEZING
- THERMOMETER FOR THE FREEZING SECTION
- LAMP FOR THE REFRIGERATOR SECTION
- THERMOSTAT FOR THE FREEZER SECTION
- THERMOSTAT FOR THE REFRIGERATOR SECTION
- INDICATOR LAMP FOR DEEP-FREEZING (YELLOW)

How to Save Energy

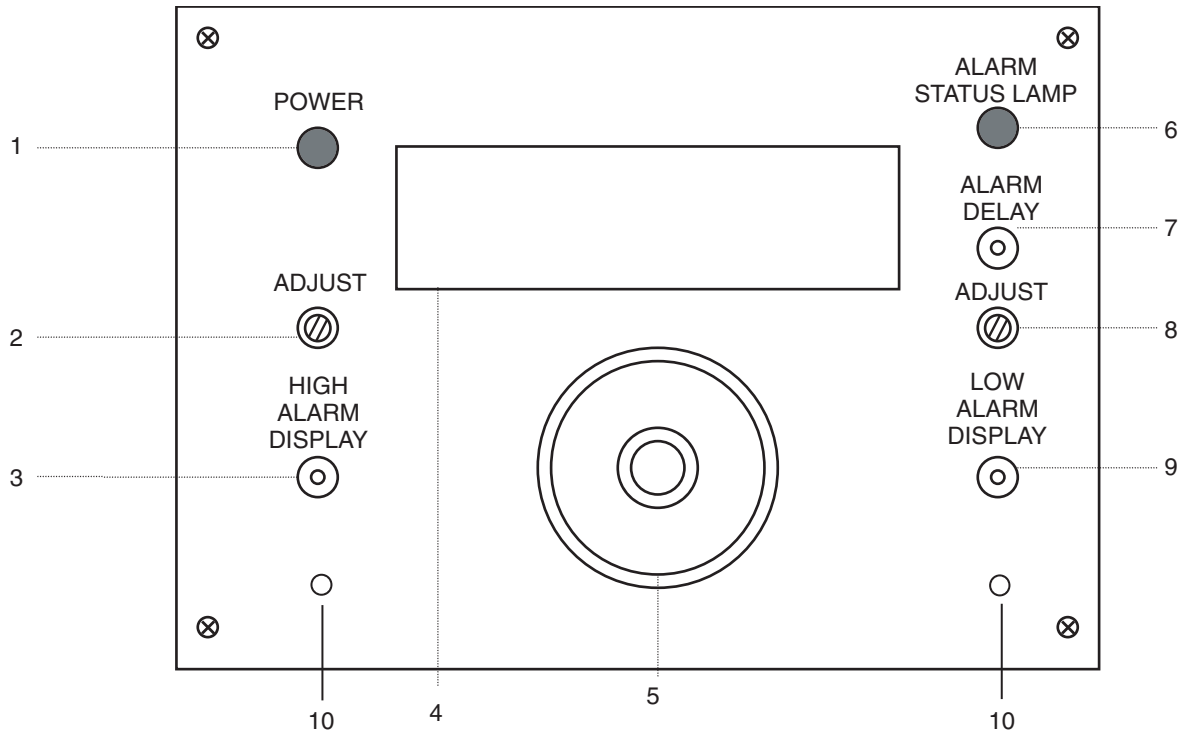
- Be sure to follow location suggestions as mentioned in the previous INSTALLATION section.
- Wipe moisture from glassware or other materials before placing them in a unit.
- Don't overcrowd the unit. Too many items can increase electrical energy demand in order to keep everything cool.
- Close the door as soon as possible in hot, humid weather.
- Make certain that the door is closed tightly.
- As soon as frost has accumulated to 1/4", defrost.
- Keep containers covered, when possible, to reduce moisture buildup.
- Set operating temperature no colder than necessary for the items being refrigerated.

Safety Tips

- After a unit is in operation, do not touch the cold surfaces, particularly when hands are damp. Skin may adhere to the extremely cold surfaces.
- Never disconnect your unit by pulling on the power cord. Always grip the plug securely and pull straight out from the outlet.
- Do not use a power cord that shows cracks or abrasions. Have a qualified electrician repair or replace damaged cords immediately.

Optional Equipment

Optional Buzzer Alarm



TEMPERATURE DISPLAY (4):

Digital devices generally do not round off a reading. In the case of this temperature monitor, when the display reports, say a value of 10 degrees, that "10" can represent any temperature from 10.0 to 10.9 degrees. Therefore, a very small change (0.1 degree or less), or a minor electronic disturbance many cause the displayed temperature to change one digit. Only when the displayed temperature is changing within a period of 20 seconds or greater can the change be related to real thermal changes in the space of time being monitored.



Note

The alarm status lamp (6) will flash rapidly and the audio will sound in short pulses during an adjustment.

READING AND ADJUSTING ALARM POINTS:

To read or set alarm points press the Display button (10) under the HIGH (3) or LOW ALARM DISPLAY (9) and while keeping it depressed, turn the adjustment screw(s) located under ADJUST (2, 8) slowly to set the desired alarm setpoint. (On dual alarm points, only ONE setting can be adjusted at a time.)

ALARM CONDITIONS:

- **HIGH SETPOINT ALARM:** If the probe temperature exceeds the HIGH setpoint (or falls below the LOW setpoint on dual setpoint models), the audio alarm will sound the red ALARM status lamp (6) will flash.

The unit's audio alarm can temporarily be silenced by depressing the DELAY button (7). The alarm is shipped set with a 30-minute delay. During the delay period, the alarm will chirp about every 30 seconds and the alarm status lamp (6) to flash during the delay period.

If the alarm condition is still present at the end of the preset 30-minute delay period, the audio alarm will turn on with full intensity.

- **LOW TEMPERATURE ALARM (9):** This alarm is triggered by the temperature falling below the desired setpoint. It is important that this low alarm point be set at a lower temperature than the high alarm.

RELAY OUTPUT:

The relay output consists of a SPDT relay that changes state with a loss of line power OR the presence of an alarm condition. The contacts are rated at 30V/1Amp.

Troubleshooting

In the event that your unit is not operating properly, check the following before calling for service assistance—this may save you the cost of unnecessary service calls.

Symptom	Possible Cause of Problem
Unit not operating.	<p>Make certain that the unit is connected to a grounded outlet.</p> <p>Make certain that temperature control knob is ON.</p> <p>Check that circuit breaker is not tripped or fuse is not blown.</p>
Unit runs continuously.	<p>Make certain that there is no heavy frost accumulation. If there is, defrost unit.</p> <p>Look at condenser to see if there is layer of dust or lint. Clean if required with a dry brush or vacuum.</p> <p>A leak around the door gasket will allow cold air to escape. This causes unit to work harder than necessary to maintain cold temperatures. Re-seat or replace the gasket if worn.</p> <p>If you have temperature set too cold, this may cause unit to run continuously. Check optimum running temperature.</p> <p>Is the ambient air over 43°C (109°F), or the units located close to heat sources? If possible, move to a different location.</p> <p>An unusually high frequency of door openings and closings can increase operating load. Unit will stabilize as these are decreased.</p>
Noise problems.	<p>This can be caused by contents of unit being set too close and rattling against each other. Rearrange contents as needed.</p> <p>Hissing or gurgling noise is caused by refrigerating fluid circulating and is normal.</p> <p>Noise can result if unit is not level on floor. Check with level.</p> <p>Fan noise: normal airflow can cause this, not a problem.</p>

Maintenance



Note

Make no attempt to service or repair a Thermo Scientific product under warranty before consulting your Thermo Scientific dealer. After the warranty period, such consultation is still advised, especially when the repair may be technically sophisticated or difficult. If assistance is needed beyond what the distributor can provide, please call Customer Service at 800-553-0039. No merchandise should be returned directly to the factory without obtaining a Return Materials Authorization (RMA) number from Customer Service.



Warning

Disconnect plug from electrical outlet before attempting any maintenance or repair of this unit.

Any internal adjustments or repairs must be performed by a qualified service representative.

Cleaning of Units

- Disconnect power cord from its outlet.
- Set the temperature control to the OFF position.
- The unit designs permit easy and rapid cleaning and should not take more than a few minutes. Remember to wear protective gloves to prevent frost bite, especially when removing items from freezer units.
- Do not use abrasive scouring powders, waxes, solvents, furniture polish, undiluted detergents or cleansers containing petroleum products on the surfaces of units.

Interior/Exterior and Door Gaskets

A solution of mild soap and water can be used for cleaning the interior, exterior and door gaskets with a soft, clean cloth. Rinse with clean water and dry thoroughly before reconnecting and turning on the unit.

Condenser

With forced-fan vented units, remove the screws that mount the grill to the unit. Pull temperature control knobs straight out. This will expose condenser for cleaning.


Caution

Do not use any sharp instrument, blade or scraper to remove ice and frost on refrigerator surfaces because of the very real danger of puncturing the cooling coil.


Caution

Do not use any electrical device to defrost the unit.

When frost accumulates to 1/4" or more, the operating efficiency of the unit will be affected.

Manual Defrost Procedure

(Models 3556-4, 3556-6, 3557-2, 3557-4, 3750, 3750-1 and 3752)

Use the following procedure to defrost manually:

- Rotate the temperature control knob to the OFF setting.
- Disconnect the power cord from its outlet.
- Remove contents of unit. If practical, wrap contents in paper and then in a heavy blanket to maintain temperature of items, especially those removed from a freezer. Wear protective gloves to prevent frostbite when handling cold items.
- Open door and allow free circulation of ambient air.
- To speed the process, place pan of warm water inside the chamber.
- Wipe out the interior.
- Replace contents.
- Reconnect power cord to outlet and set temperature control to desired operating temperature.

**Caution**

Do not use any sharp instrument, blade or scraper to remove ice and frost on refrigerator surfaces because of the very real danger of puncturing the cooling coil.

**Caution**

Do not use any electrical device to defrost the unit.

When frost accumulates to 1/4" or more, the operating efficiency of the unit will be affected.

Manual Defrost Procedure (Model 3772 Only)

Use the following procedure to defrost manually:

1. Turn the temperature control knob to the 0 setting.
2. Disconnect the power cord from its outlet.
3. Remove contents of unit. If practical, wrap contents in paper and then in a heavy blanket to maintain temperature of items, especially those removed from a freezer. Wear protective gloves to prevent frostbite when handling cold items.
4. Open door and allow free circulation of ambient air.
5. Fold out the draining spout, mount the enclosed extension and place a bowl under it.
6. To speed the process, place a pan of warm water inside the chamber.
7. Wipe out the interior when all frozen condensate has thawed.
8. Replace contents.
9. Reconnect power cord to outlet and set temperature control to desired setting.



Model 3772 Illustrating drip pan position

Reversing the Front Door (Model 3551)

1. Switch off at the socket outlet and pull out the mains plug.
2. Remove all food from the appliance.
3. Using a cross-headed screwdriver, remove the top hinge screws.
4. Remove the top hinge while holding the door.
5. Lift the door carefully from the lower hinge.
6. Remove the lower hinge.
7. Reposition the upper hinge.
8. Remove the lower hinge plugs. Remove plugs with tip of small a screwdriver.
9. Reposition the door hinge bushing and plugs on the opposite side.
10. Reposition the lower hinge on the opposite side and fit the hinge washer.
11. Refit the door.
12. Locate the top hinge in the door and loosely attach to the cabinet.
13. Align the door and then tighten screws firmly on the top hinge. Check that the door open and closes easily. Make sure there are no gaps that would allow air into the cabinet, adjust the top hinge if necessary.

Reversing the Front Door (Model 3556, 3557 and 3751)

1. Remove bolts and plugs using a screwdriver.
2. Unscrew the bolts connecting the upper hinges to the upper platform. Remove the upper platform by first pulling it forward and then lifting it upwards.
3. Remove the door by unscrewing the bolts in the upper hinges.
4. Remove the buffer by unscrewing the bolts on both of its sides.
5. Break off the part behind the buffer through which the lower hinges pass using a knife or your hands.
6. Remove the lower hinge and mount it on the other side tightening its bolts.
7. Remove the hole plugs of the door handle with a knife.
8. Fit the hole plugs of the door handle to the other side.
9. Fit the buffer to its place.
10. Mount the door to its place.
11. Fit the upper hinges into their places—do not tighten the bolts, but leave them loose.
12. Adjust the vertical and parallel position of the door by eyesight then tighten the bolts of the upper hinges.
13. Fit the upper platform into its place.
14. Fit the bolts connecting the upper hinges and the upper platform but, do not tighten them.
15. Adjust the upper platform until it is level, then tighten the bolts in operations
16. Fit the plugs of the upper platform.

Reversing the Front Door (Model 3772)

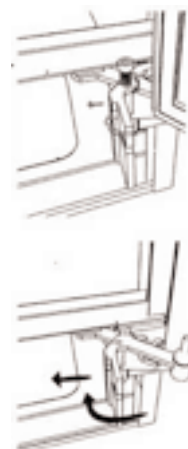
1. Turn thermostats to 0 and disconnect power cords
2. Remove all items from inside the appliance
3. Using the proper hex screwdriver, remove the top hinge screws



4. Remove the top hinge while holding the door
5. Lift the door carefully from the middle hinge
6. Remove the middle hinge and lift the lower door off of pivot



7. Remove the kick panel. Unscrew nuts and pivot, remount on the opposite side of the angle iron.



8. Remove plastic caps on the new middle hinge side. Remove screw and mount lower door and fasten middle hinge
9. Remove the door handle by removing mounting screws and remount on opposite side
10. Mount the upper door on pivot and fasten the upper hinge on opposite side then tighten screws



11. For adjustment of doors, loosen screws and reposition door into place and tighten screws



12. Move handle to opposite side of door



Replacement Parts

To obtain replacement parts information and pricing, please call the Customer Service Department at 1-800-553-0039 and have the unit's model, serial and code numbers available. This information is located on data plates on the rear of the unit.

Ordering Procedures

Please refer to the Specification Plate for the complete model number, serial number, and series number when requesting service, replacement parts or in any correspondence concerning this unit.

All parts listed herein may be ordered from the **Thermo Scientific** dealer from whom you purchased this unit or can be obtained promptly from the factory. When service or replacement parts are needed we ask that you check first with your dealer. If the dealer cannot handle your request, then contact our Customer Service Department at 563-556-2241 or 800-553-0039.

Prior to returning any materials, please contact our Customer Service Department for a "Return Materials Authorization" number (RMA). Material returned without an RMA number will be refused.

One Year Limited Warranty

This Thermo Scientific product is warranted to be free of defects in materials and workmanship for one (1) year from the first to occur of (i) the date the product is sold by the manufacturer or (ii) the date the product is purchased by the original retail customer (the "Commencement Date"). Except as expressly stated above, the MANUFACTURER MAKES NO OTHER WARRANTY, EXPRESSED OR IMPLIED, WITH RESPECT TO THE PRODUCTS AND EXPRESSLY DISCLAIMS ANY AND ALL WARRANTIES, INCLUDING BUT NOT LIMITED TO, WARRANTIES OF DESIGN, MERCHANT ABILITY AND FITNESS FOR A PARTICULAR PURPOSE.

An authorized representative of the manufacturer must perform all warranty inspections. In the event of a defect covered by the warranty, we shall, as our sole obligation and exclusive remedy, provide free replacement parts to remedy the defective product. In addition, for products sold within the continental United States or Canada, the manufacturer shall provide free labor to repair the products with the replacement parts, but only for a period of ninety (90) days from the Commencement Date.

The warranty provided hereunder shall be null and void and without further force or effect if there is any (i) repair made to the product by a party other than the manufacturer or its duly authorized service representative, (ii) misuse (including use inconsistent with written operating instructions for the product), mishandling, contamination, overheating, modification or alteration of the product by any customer or third party or (iii) use of replacement parts that are obtained from a party who is not an authorized dealer of Thermo Scientific products.

Heating elements, because of their susceptibility to overheating and contamination, must be returned to the factory and if, upon inspection, it is concluded that failure is due to factors other than excessive high temperature or contamination, the manufacturer will provide warranty replacement. As a condition to the return of any product, or any constituent part thereof, to the factory, it shall be sent prepaid and a prior written authorization from the manufacturer assigning a Return Materials Number to the product or part shall be obtained.

IN NO EVENT SHALL THE MANUFACTURER BE LIABLE TO ANY PARTY FOR ANY DIRECT, INDIRECT, SPECIAL, INCIDENTAL, OR CONSEQUENTIAL DAMAGES, OR FOR ANY DAMAGES RESULTING FROM LOSS OF USE OR PROFITS, ANTICIPATED OR OTHERWISE, ARISING OUT OF OR IN CONNECTION WITH THE SALE, USE OR PERFORMANCE OF ANY PRODUCTS, WHETHER SUCH CLAIM IS BASED ON CONTRACT, TORT (INCLUDING NEGLIGENCE), ANY THEORY OF STRICT LIABILITY OR REGULATORY ACTION.

For the name of the authorized Thermo Scientific product dealer nearest you or any additional information, contact us:

2555 Kerper Blvd., Dubuque, Iowa, 52004-0797

Phone: 563-556-2241 or 1-800-553-0039

Fax: 563-589-0516

E-mail: mkt@thermofisher.com

Web: www.thermo.com